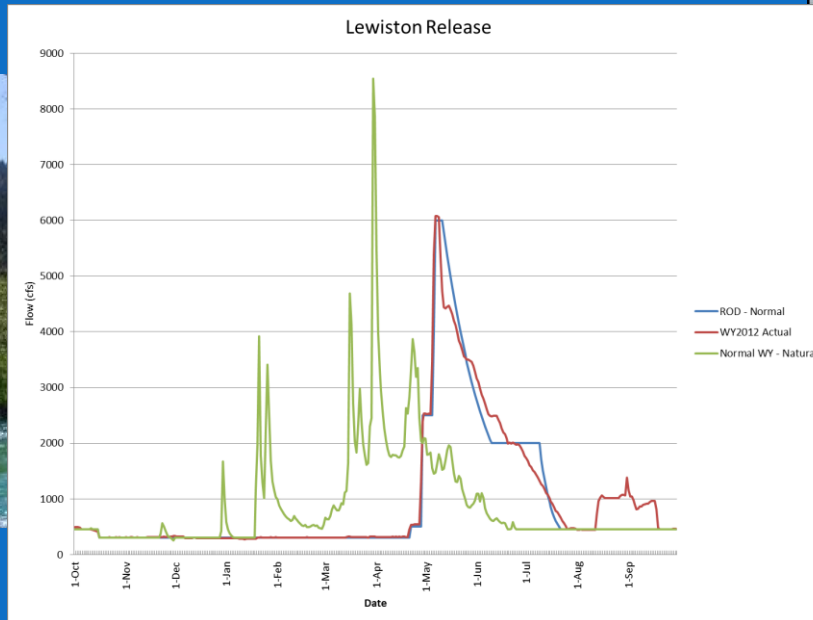


TRRP DSS Exercise – Alternative Hydrographs



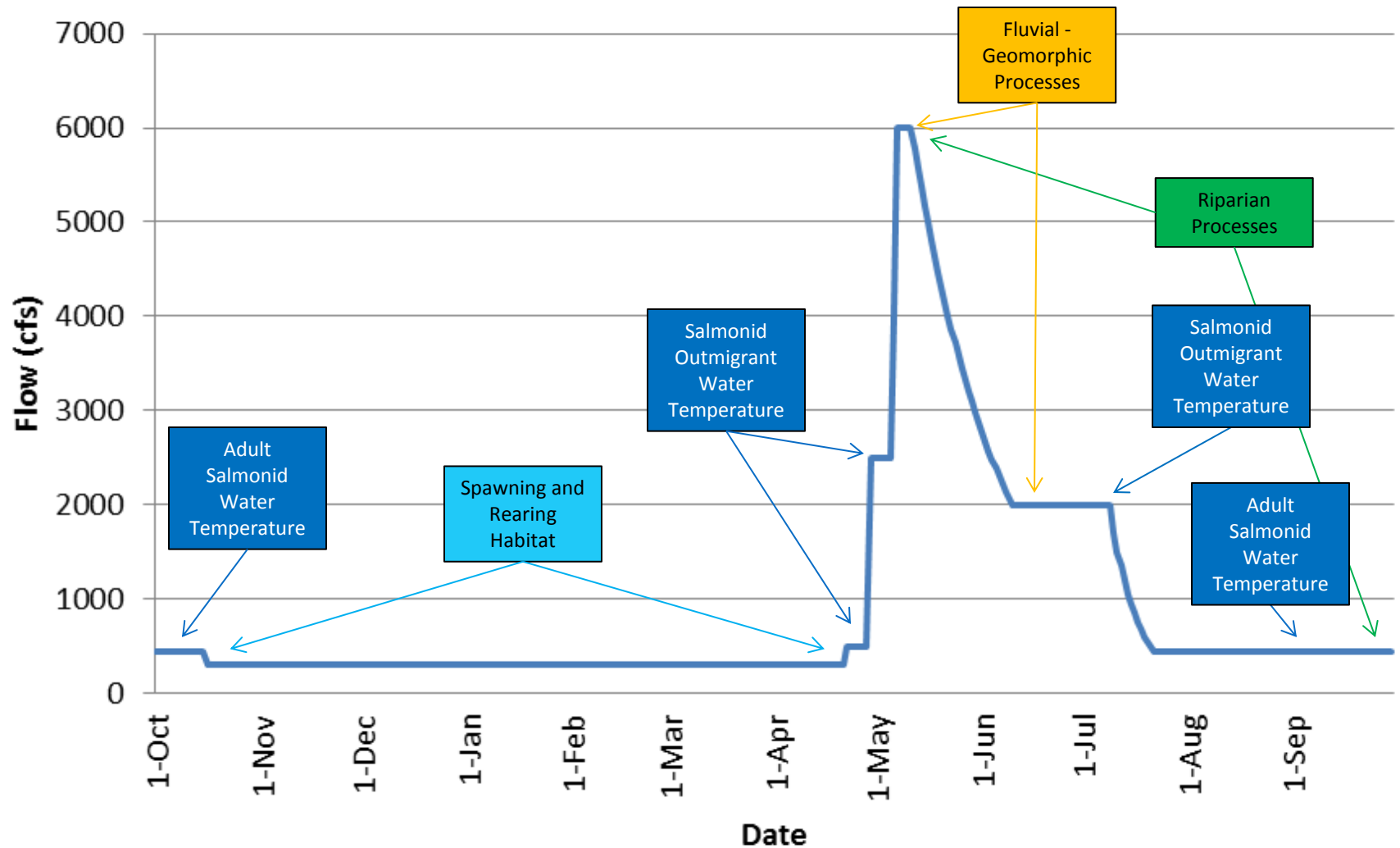
Trinity River DSS Exercise – WY 2012 Alternate Hydrographs

1. ROD Normal WY - 647 TAF instream release
2. Actual WY 2012 Release – 647 TAF + fall flow augmentation
3. Natural hydrograph mimicking Salmon River – 647 TAF
 - constrained to 647 TAF - post-hoc simulation
 - minimum flow constraints (300 and 450 cfs)

ROD – Normal WY Objectives

- Provide spawning and rearing habitat in the existing channel.
- Provide suitable temperatures for holding spring chinook and spawning spring and fall chinook and coho.
- Provide optimal temperatures outmigrant salmonids.
- Coarse sediment transport – scour and re-deposition
- Fine sediment transport/reduction.
- Riparian regeneration on floodplains and mortality along low water edge.

ROD Normal WY, 647 TAF

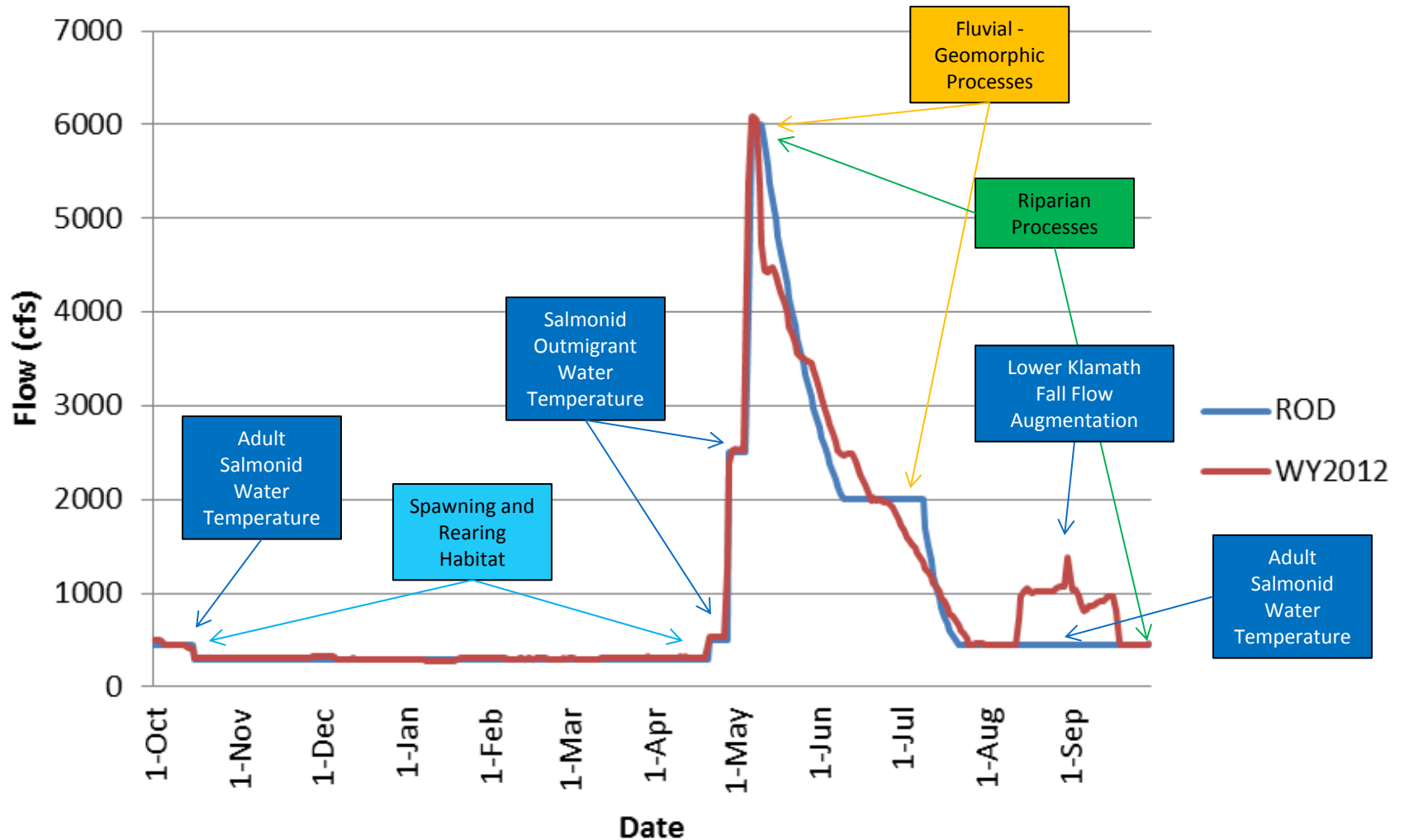


WY 2012 Riparian Hydrograph

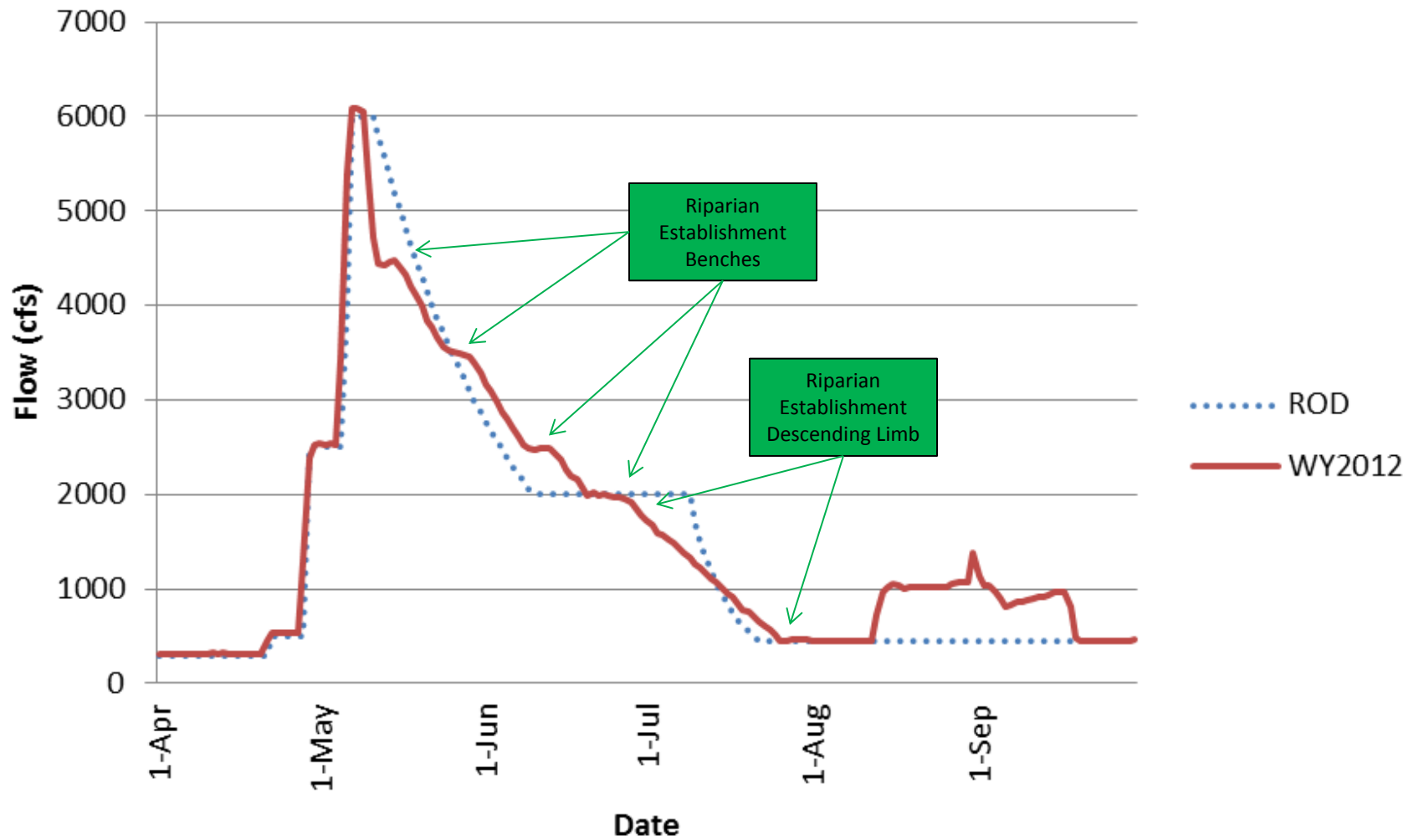
Water Year 2012 Riparian Hydrograph Objectives:

1. Encourage establishment and growth of riparian vegetation on floodplains
2. Scour up to 3-yr old woody riparian vegetation along low flow channel margins and scour younger plants higher on bar flank
3. Increase species and age diversity of riparian vegetation
4. Create moist ground surfaces on constructed and natural floodplains between 2,500 and 6,000 cfs to provide sufficient time for a riparian hardwood seed to germinate and begin to grow
5. Descend at a rate equal to or less than 0.10 ft a day at the Trinity River above the North Fork

WY2012 Actual and ROD Normal



WY2012 Actual: Riparian Regeneration and Establishment

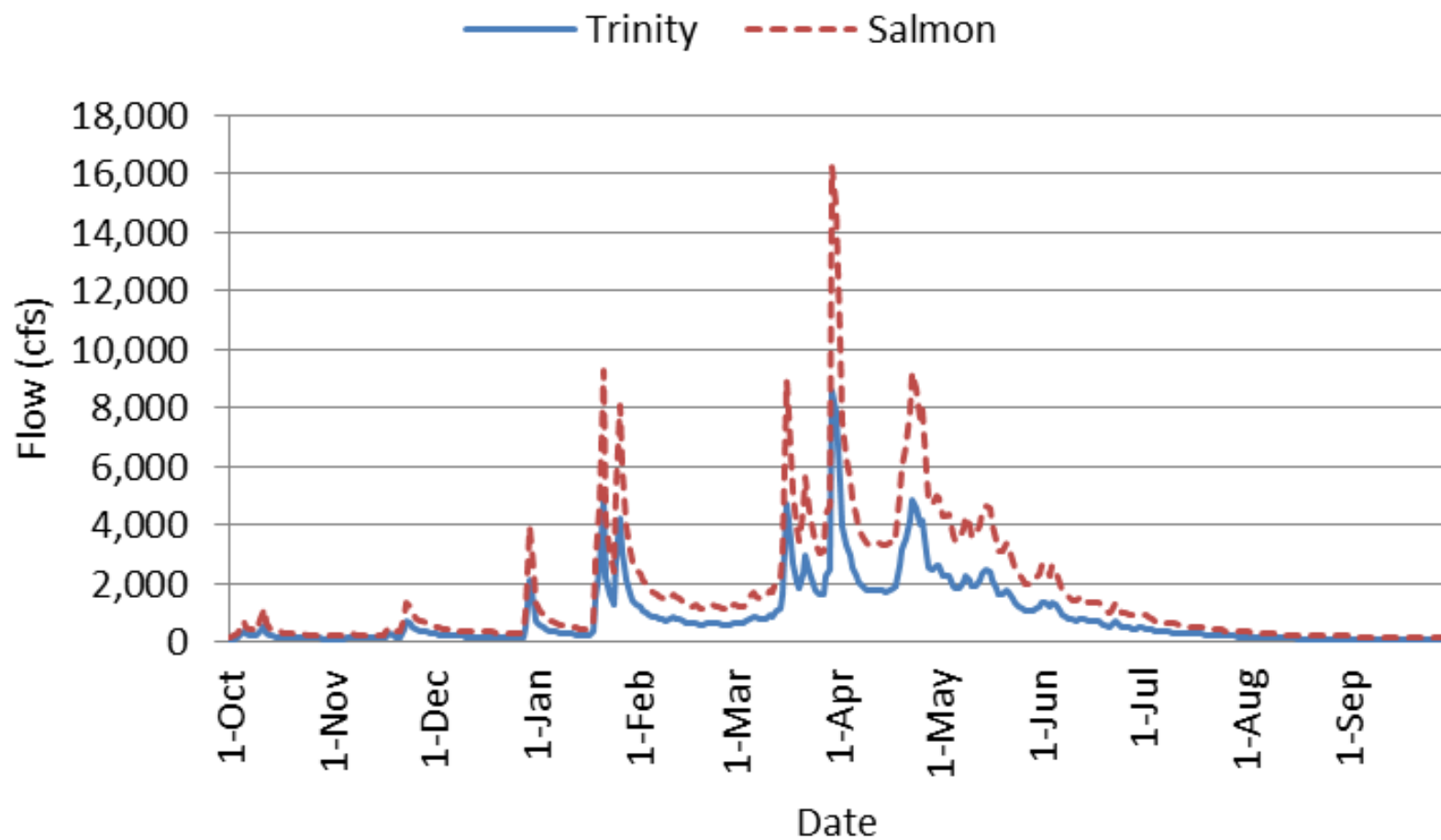


Natural Hydrograph

Natural hydrograph objectives:

1. Mimic natural hydrograph based on hydrologic pattern observed in the Salmon River is WY2012.
- Constraints:
 1. Total volume released = 647 TAF
 2. 300 cfs minimum flow during spawning and rearing
 3. 450 cfs summer/fall for adult temperature criteria
 4. Rest of hydrograph scaled (0.8) to gain water to meet #2 & #3 constraints.

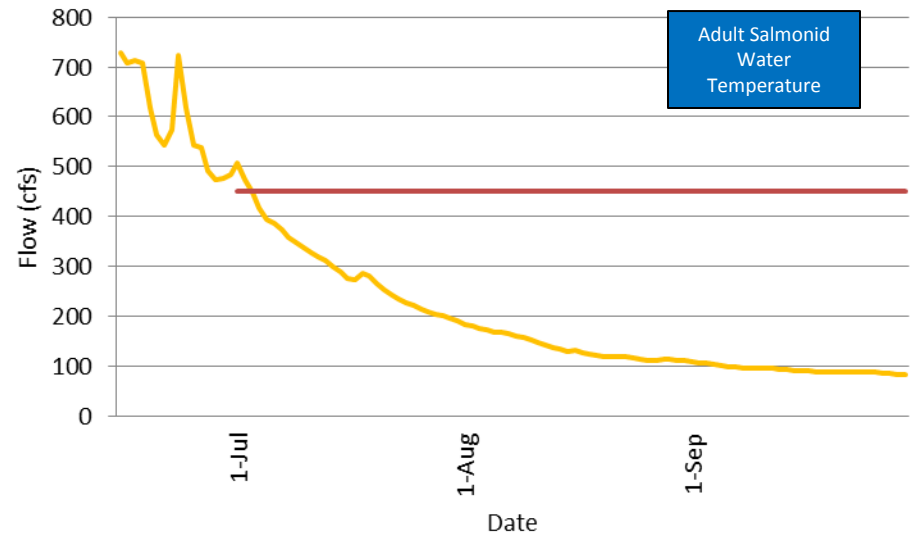
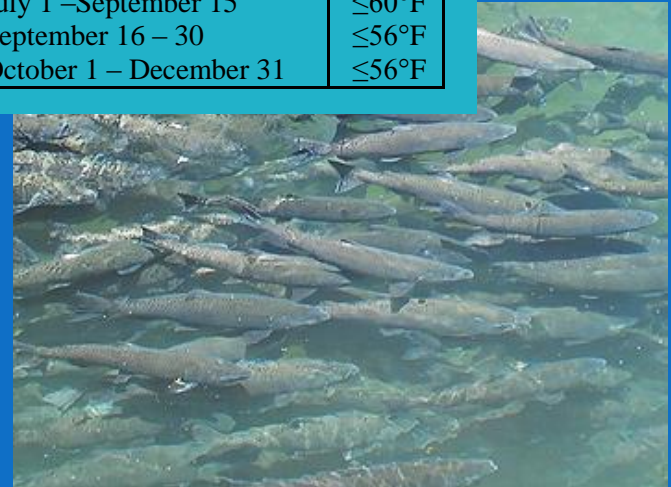
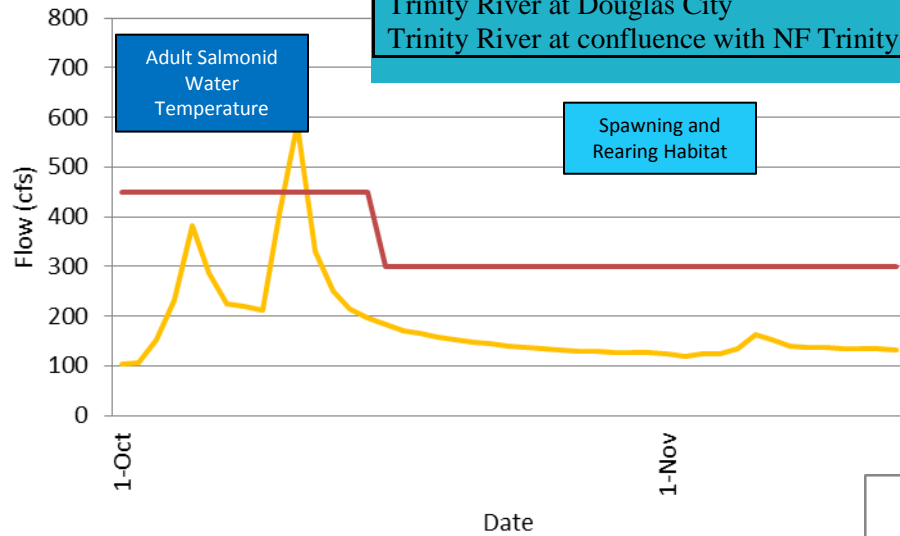
Trinity Natural Pattern Hydrograph based on Salmon River Hydrology WY2012 – Normal WY; 647,000 AF



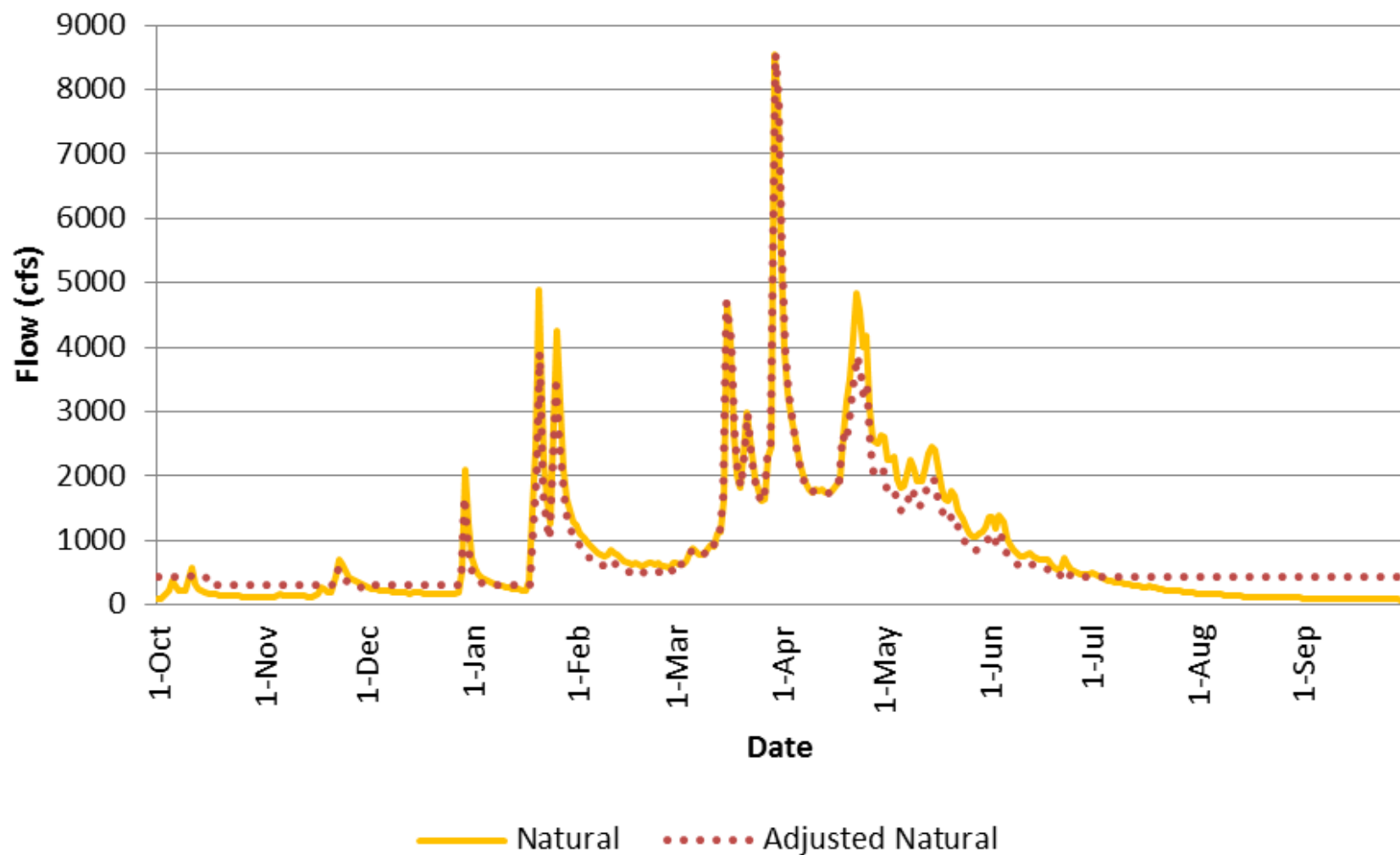
Natural Hydrograph Constraints

Trinity River adult salmonid water temperature targets (USFWS and HVT 1999)

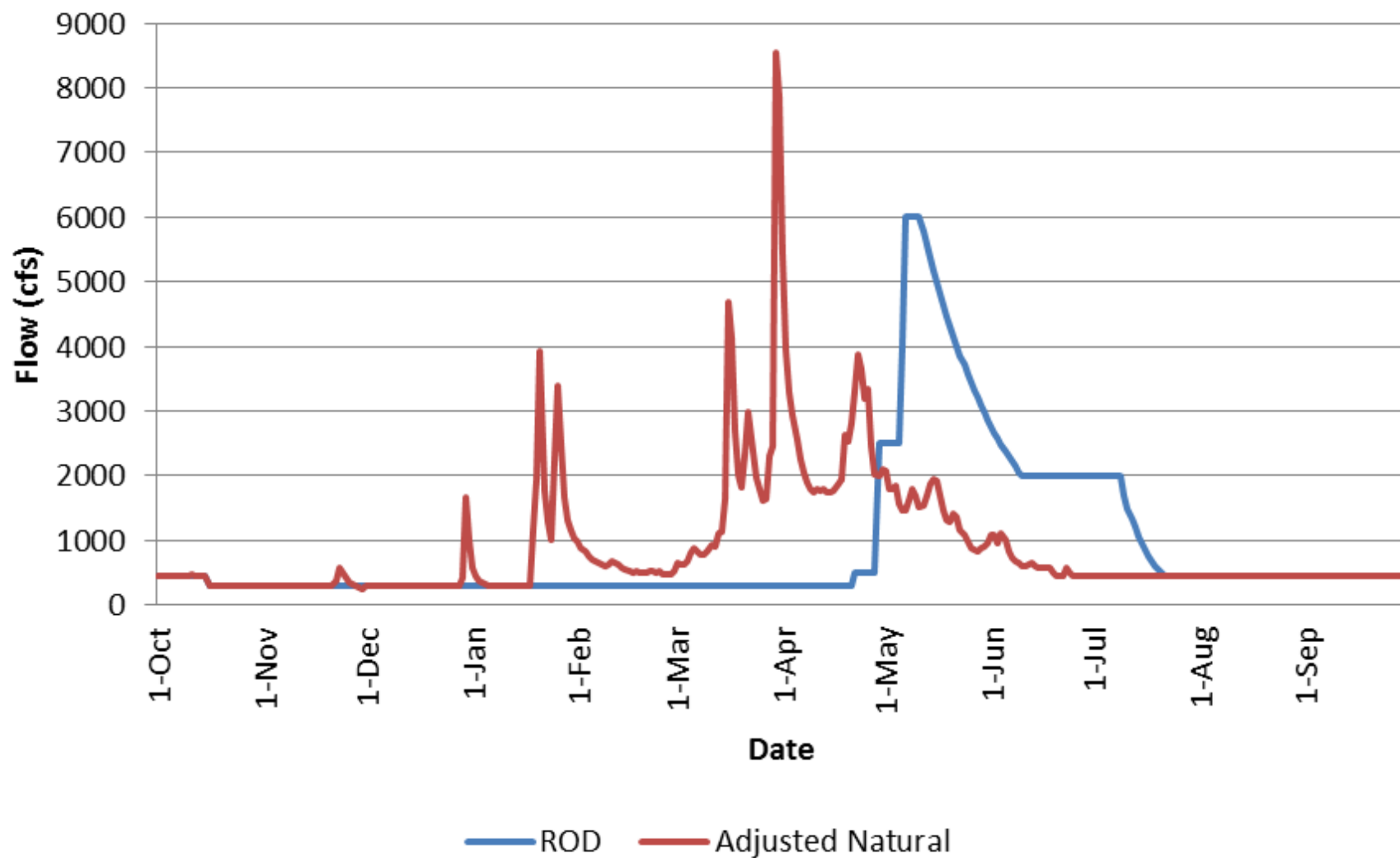
Reach	Date	Target
Trinity River at Douglas City	July 1 – September 15	$\leq 60^{\circ}\text{F}$
Trinity River at Douglas City	September 16 – 30	$\leq 56^{\circ}\text{F}$
Trinity River at confluence with NF Trinity River	October 1 – December 31	$\leq 56^{\circ}\text{F}$



Trinity Natural Pattern Hydrograph and Modified Natural Hydrograph



Trinity Natural vs ROD Hydrograph – WY2012



Scenario Hydrographs

